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1990 PROFESSIONAL SEMINAR OVERVIEW

As the 1990 Professional Seminar convened on July 21st at The Monroe Institute Center, members quickly realized that Hemi-Sync's reputation and recognition had achieved a new level of success in the world. Echoing the seminar theme, "Expansion and Integration," feature presenters demonstrated this wider acceptance of the Hemi-Sync technology into established institutional systems and practices, such as corporate culture, teenagers in special education, psychiatry, and retail services.

Work with developmentally disabled children revealed the startling impact of Hemi-Sync in improving sensory integration. Reports on other research in progress by Professional Division members included the enhancement of animal environments, pain management, and the publication of a practical guide to Hemi-Sync application for lay people.

A report on the Brainmapping Project offered the most current findings at TMI on the correlation between brain waves and consciousness states. And, for the first time, independently acquired Hemi-Sync brain mapping data was presented, revealing fascinating comparisons. Advanced understanding of Hemi-Sync's influence on human neurophysiology may also be available through dynamical analysis, as suggested in an intriguing presentation on chaos theory and brain function. Technological discussions concluded with a briefing on the current hardware development program at TMI which included a preview of two new Hemi-Sync devices, the Explorer I, and the Sleep Processor prototype. (The availability of these and future devices will be announced when production dates are established. Watch for bulletins in the TMI FOCUS.)

The upgraded Center facilities provided added comfort during the week, and a tour of the TMI laboratory introduced members to new hardware and software installed in both the research lab and audio production studio during the past year. Meeting with the group, Bob Monroe described the concepts of the "Timeout" and "Lifeline" programs slated for release in 1991. Timeout is designed to aid individuals in achieving deep and productive sleep, and Lifeline will offer assistance to those making the transition from physical life. (Details on both of these programs will be published at a later date.) The open house at the home of Nancy and Bob Monroe, a recently established tradition of the Professional Seminar, was enjoyed by everyone.

Members took great advantage of the Open Forum sessions to share ideas, demonstrate techniques, and establish collaborative relationships. Some of the topics included were a positive immunity (AIDS and HIV+) pilot program; Hemi-Sync and blindness; accelerated learning; Hemi-Sync and natural-energy healing; Hemi-Sync in prisons; vision therapy; self-healing; and the global economy.

Two other features of the Seminar continue annually by popular demand and are offered to support the inner work of the members: the *Personal Resource Exploration Program (PREP)* sessions—customized Hemi-Sync experiences in the lab isolation booth—and the Hemi-Sync tape-day intensive, based on the *GATEWAY* format of guidance into progressively deeper levels of consciousness.

Concluding the week's journey through sharply analytical and highly intuitive sessions, the group was regaled by special guest entertainer, Anndrena Belcher. Anndrena, whose work has been recognized by the art commissions of Virginia, Tennessee, and Kentucky, blends the stories, music, and dance of the Appalachian Mountains into a performance both hilarious and haunting.

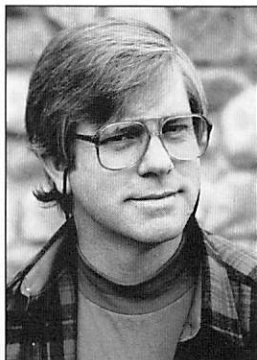
As members departed for home on Friday, July 27th, charged with enthusiasm and inspiration, plans were already being discussed for the 1991 gathering.

FEATURE PRESENTATIONS

The following articles summarize the feature presentations made at the 1990 Professional Seminar.

HEMI-SYNC BRAIN WAVE CORRELATES TO KNOWN STATES OF CONSCIOUSNESS AS MEASURED IN CONVENTIONAL EEG STUDIES

by F. Holmes Atwater



F. Holmes Atwater, a retired military officer, has been a college instructor, scientific investigator, and behavioral engineer specializing in the design and application of methods for developing advanced human potentials. He received a B.S. degree from the University of Nebraska, and completed graduate coursework in counseling psychology at the University of Northern Colorado. Mr. Atwater came on staff as the Brainmapping Project coordinator in September of 1988 and has been associated with The Monroe Institute since 1977.

For more than thirty years science has been studying brain waves in an attempt to understand human behavior better. Now, after twenty-five years of research with HemiSync, investigations at The Monroe Institute are beginning to reveal patterns of mind-brain activity activated by the Hemi-Sync process.

The mission of the Brainmapping Project, Mr. Atwater began, is to direct research efforts "solely to the development of methods and techniques that will aid others in the evolution and growth of human consciousness and perception. Through such studies, the Institute is able to identify states of consciousness and perception previously considered not measurable by conventional research..." This project, now in its third year at TMI, was initiated at the 1987 Professional Seminar. [For a complete historical summary of the Brainmapping Project, see BREAKTHROUGH, WINTER 1989, Vol. VII, No. 1; HEMI-SYNC JOURNAL, FALL 1989, Vol. VII, No. 4; and HEMI-SYNC JOURNAL, SPRING 1990, Vol. VIII, No. 2]

Mr. Atwater first reviewed the technology employed to measure human brain-wave patterns during specific states of consciousness. "Here in the laboratory of the Institute, our Brainmapping Project uses a... state-of-the-art high-resolution topographic brain-mapping device called the NRS-24. By providing multivariate real-time data acquisition and analysis, the NRS-24 allows us to converge rapidly and systematically on specific locations of the neocortex [the gray matter covering the surface of both cerebral hemispheres] and on Hemi-Sync frequencies which best correlate with desired state changes."

Illustrating his talk liberally with slides, Mr. Atwater explained that brain-wave electrical activity is measured in amplitude and frequency. Amplitudes from 20 to 300 microvolts, and frequency ranges (from high to low frequency) of Gamma, Beta, Alpha, Theta, and Delta, are the main areas of interest. "Although we can measure the electrical activity of the neocortex with scalp electrodes," he clarified, "the exact source of the brain's electrical potentials is still debated in electroencephalogram (EEG) literature." In spite of this controversy over EEG origins, research shows that the EEG exhibits certain regularities with fairly predictable relationships to known psychological states.

Published literature and brain-wave monitoring of sleep states at TMI agree that specific patterns are characteristic of the sleep process [see Figure 1], while research on attentional states uses the model of a continuum [see Figure 2], ranging from a "narrow focus" to an "open focus." As with a camera lens, a narrow focus is characterized by the restriction of perception to a particular identified point of attention. It is accompanied by a predominance of high-frequency, desynchronized EEG activity. Open focus is characterized by a wide, unrestricted perception and a diffuse range of attention. Its predominant EEG activity is of lower frequency, higher amplitude, and is more synchronous. Like sleep states, attentional states can be influenced by Hemi-Sync. The Hemi-Sync *Concentration* tape, which stimulates highly focused, cognitive attention, typifies a narrow-focus format, while the Free Flow 10 tape demonstrates an open-focus format.

"Given the relationships between changes in states of consciousness and changes in the electrical activity of the brain," Mr. Atwater said, "researchers have gone on to investigate particular alterations of consciousness, sometimes called 'altered states of consciousness', such as meditation, ... and the 'twilight state'." Meditation research cites at least three stages, or levels, of meditation which have corresponding brain-wave activity indicating specific open-focus attentional states.

One level, often achieved by adept meditators, is characterized by a spread of high-amplitude Alpha waves from the occipital to the frontal areas of the scalp. Many of TMI's brain-mapped subjects exhibit a similar pattern of synchronous activity when experiencing a Focus 12 state. Another level of meditation, associated with synchronous Theta waves from the frontal to occipital areas, has been seen consistently with individuals experiencing a Focus 15 state.

The deepest level, present only among advanced meditators, is characterized by high Beta and Gamma activity measured over the entire scalp. Skilled Hemi-Sync users in a Focus 21 state have demonstrated high Beta waves with synchronous activity in the lower frequencies. Hemispheric synchrony is also a consistent finding in EEG research on meditators using a variety of techniques. Hemi-Sync appears to promote the recurrence and persistence of this synchrony. "Although deep relaxation or sleep are possible with the Hemi-Sync process," summarized Mr. Atwater, "other states [such as meditation/Focus 12, 15, and 21 experiences] appear distinct in that they invariably involve a mental device which serves to keep the individual conscious, with some degree of attentional focus."

Mr. Atwater then discussed correlations between EEG research and Hemi-Sync influence relative to Stage I sleep (the "twilight," or hypnagogic, state), which occurs briefly just prior to sleep. This twilight state is characterized by subjective experiences of enhanced imagery, free association, a decrease in critical judgment, and a predominance of Theta brain-wave activity. Learning, conflict resolution, and positive change are facilitated in this state. Therefore, techniques, including Hemi-Sync, have been developed to aid subjects to sustain Theta-wave production over longer periods of time. Stating that "the *H-PLUS* series of tapes is designed to provide access to states of consciousness based in the Theta domain," Mr. Atwater showed topographic brain maps of a subject listening to an *H-PLUS* tape. The brain map indicated the production of primarily Theta frequencies.

"Topographic brain-wave mapping has provided us with a whole

new way of exploring the mind-brain interface," he explained. Displaying a series of slides depicting specific but, as yet, enigmatic patterns, he continued, "There are numerous brain-wave patterns for which there is little or no known explanation to be found within historical scientific studies." This is a fertile area for collection and correlation of data from disparate sources.

Two brain maps of the same subject before and after Hemi-Sync introduction completed the visual presentation. Before Hemi-Sync, the brain-wave patterns were random and asynchronous. Following Hemi-Sync, the same subject demonstrated a "wonderfully synchronous pattern" over a sustained period of time, representing a state of focused attention.

Mr. Atwater concluded with an explanation and invitation to interested researchers: "The Brainmapping Project has not been designed to conduct studies in form and protocol that will ensure acceptance by orthodox segments of our culture and we do not possess any papers or other documentation suitable for this purpose. The Institute recognized long ago that such an effort may not be possible within the area of investigation covered in our work. The question of compatibility is too great. We do, however, encourage other organizations to conduct studies that may offer additional or extended verification of our work."

Figure 1.

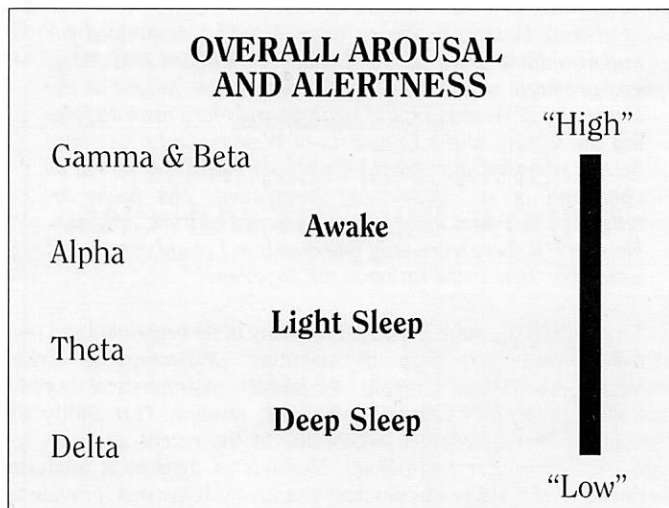
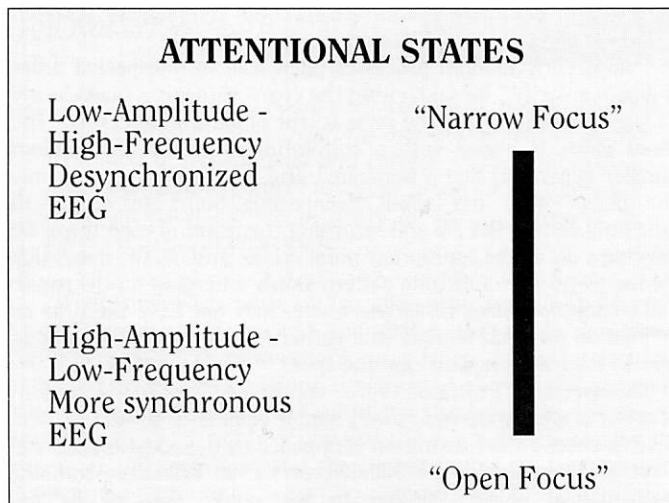
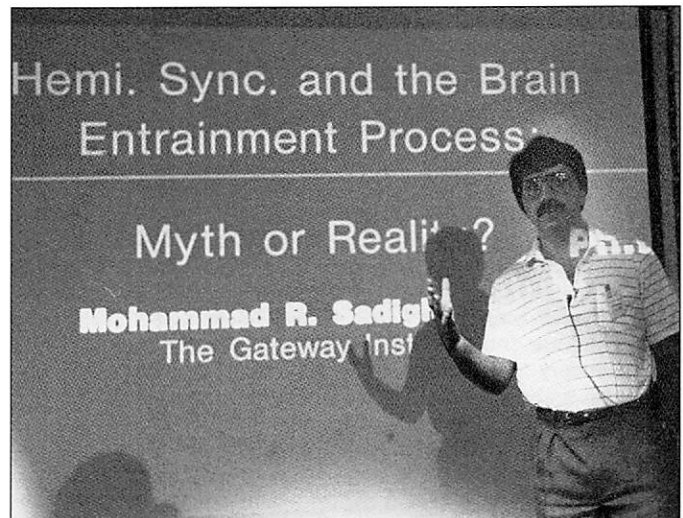


Figure 2.



HEMI-SYNC AND THE BRAIN ENTRAINMENT PROCESS: MYTH OR REALITY?



by Mohammad R. Sadigh, Ph.D.

Mohammad Sadigh is assistant director of psychology and psychophysiological services at the Gateway Institute, a center for pain and stress management. He practices psychotherapy and biofeedback and is in charge of the neuropsychological laboratory. His primary research activity is in the area of computer-assisted dynamic brain mapping. Dr. Sadigh is also the composer and artist of "Inner Journey," the newest release in TMI's METAMUSIC ARTIST SERIES. He lives in Bethlehem, Pennsylvania.

Dr. Sadigh began by describing his personal interest in extraordinary states of consciousness. This interest, and the current plethora of mind-brain devices and techniques available, led him to begin investigating some of them in his neuropsychological lab. Utilizing a 16-channel HZI Dynamic Brain Mapping Unit, he tested subjects' responses to the devices to determine if brain-wave states were altered in accordance with the manufacturers' claims. Results were consistently disappointing. The data obtained did not validate claims of hemispheric synchronization or demonstrate a predominance of brain waves in the targeted ranges.

While participating in a *GATEWAY VOYAGE* at The Monroe Institute, Dr. Sadigh experienced a personal Hemi-Sync session in the laboratory isolation booth. The subsequent burst of creative energy inspired two projects: first, to write music; and second, to demonstrate "what is happening with Hemi-Sync." Is the entrainment process, defined by Dr. Sadigh as influencing the brain to produce specific states, a reality or a myth? He set out to discover the answer.

Using slides to illustrate the visual displays available on his brain-mapping system, Dr. Sadigh demonstrated the ease of pattern recognition with a color-coded topographic map versus conventional EEGs' "squiggly lines." Stressing the importance of the secondary and tertiary, as well as primary, brain-wave activity as an indicator of brain state, he displayed a topograph showing a predominance of Theta waves as the primary activity in comparison to a second topograph showing predominantly Alpha waves as the secondary activity.

Shortly after his visit to TMI, Dr. Sadigh spoke with a biologist who had meditated regularly for about 15 years. The biologist said that after five years of practice he began to "feel" his brain becoming synchronized during meditation. Dr. Sadigh suggested checking it out on the brain mapper. Using a single-subject research design the biologist was brain mapped before, during, and after entering his meditative state.

To Dr. Sadigh's great excitement, topographs revealed hemispheric synchrony both in primary and secondary activity during meditation but not during the pre- or posttest period. Furthermore, while primary activity was in the Alpha range, secondary activity was predominantly Theta. The Theta was of particular interest because, not only is it difficult to learn to produce a Theta state, but sustaining it over time is rare.

Armed with documentation on the adept meditator, Dr. Sadigh began brain mapping subjects using Hemi-Sync. His first subject was a female volunteer who had attended a *GATEWAY VOYAGE* at TMI and worked with Hemi-Sync tapes about two months. Using the same single-subject research model, the pretest showed an asynchronous mixture of Alpha, Beta, and Theta. He then introduced the *Introduction to Focus 10* Hemi-Sync tape. Results were astounding: the subject's topograph showed primary Theta activity, and secondary Alpha activity—both *synchronized hemispherically*. The posttest showed a return to an asynchronous mixture of Alpha and Theta waves.

The next subject, a male, had attended the *GATEWAY VOYAGE* two to three years ago, and had used a few *H-PLUS* series tapes since, although not regularly. His pre- and posttests revealed asynchronous Theta and Alpha activity. During Hemi-Sync introduction (the *Free Flow 12* tape) the subject produced primary Beta and secondary Alpha activity, again, synchronized hemispherically. Subsequently, Dr. Sadigh decided to replicate the *Free Flow 12* study with the same subject. Results exactly duplicated those in the first test: asynchronous Theta and Alpha in the pretest and posttest, and synchronous Beta and Alpha during Hemi-Sync. Because the sub-

Dramatic changes in synchrony were present in all situations.

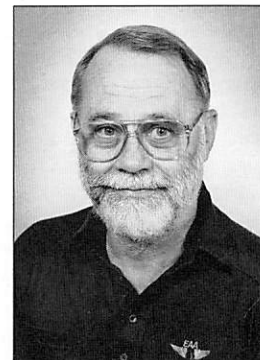
ject had experienced *H-PLUS* tapes, Dr. Sadigh tried a brief experiment. During the posttest period, he made a verbal suggestion to the subject: "Eleven, Access Channel open," which is an encoding or verbal cue present on all *H-PLUS* tapes. In response, the subject produced synchronous primary Beta and secondary Alpha waves. This response, to a verbal cue only, suggests another level of entrainment: that Hemi-Sync, in addition to stimulating targeted brain states, fosters the ability of an individual to reproduce that state at will.

These and other tests performed by Dr. Sadigh generate as many questions as answers. Dramatic changes in synchrony were present in all situations. But what about the intimate relationship between subjective experiences and brain-wave activity? What is the significance of patterns of amplitude within the frequency ranges during hemispheric synchronization? What happens when a subject "clicks out," or experiences a lapse of consciousness during Hemi-Sync? After compiling more data with additional subjects, Dr. Sadigh will offer it to other researchers. He also hopes eventually to publish some of his results.

To conclude his formal presentation, Dr. Sadigh shared some philosophical thoughts on the implications of this research. While the presence of measurable brain-wave activity supports the concept that human beings transmit information, a compatible notion occurs: that we are, in fact, highly complex receivers; that our brains work to "tune in" to selected frequency transmissions as our brain states change. If this is so, what is the source of these transmissions? It is this ultimate question which he intends to pursue.



WHAT CAN CHAOS THEORY TELL US ABOUT CONSCIOUSNESS AND BRAIN FUNCTION?



by Glenn Pearce, Ph.D.

Glenn Pearce, professor of philosophy, completed his undergraduate work at the College of William and Mary, and graduate studies at Duke University. He taught at the University of Wisconsin and William and Mary prior to joining the faculty of the University of Western Ontario, where he has remained for twenty-three years, and has served as chairman of its philosophy department. His main intellectual interests are cognitive science and metaphysics. He says, "If there were only one question I could ask God, it would be: 'How is the universe put together?'"

The science of chaos, espoused by many of its proponents as the greatest evolutionary leap in scientific understanding since quantum mechanics, reveals a larger mathematical order underlying systems previously considered random. Our ability to apply chaos theory today is largely due to the recent advances in high-speed computer technology. Methods of dynamical analysis developed in the study of complex, chaotic systems may provide a powerful new way of comprehending the behavior of the nervous system under the influence of Hemi-Sync. In this presentation, Professor Pearce discussed the concepts of chaos theory and suggested lines of investigation which could complement research already under way in the TMI Brainmapping Project.

"Apparently random processes often lead to unexpected order and/or regularity," he said, citing the chaos game as a marvelously simple illustration, "and the same is true of natural processes." The chaos game is played with a conventional die (or any random number generator) and a numbered grid. The game requires only one player—who has about twenty-four hours to devote to randomly casting the die and recording the result of each throw by drawing a dot at the appropriate point on the grid. As the hours tick by, the player sees a definite pattern slowly emerging on the paper. Fortunately for chaos researchers, who may not have the time or inclination for such tedious data gathering, high-speed computers crunch the numbers with ease and speed.

"Conversely," Professor Pearce continued, "apparently random behavior is often governed by very simple equations, subject to 'iterative feedback'." An illustration is provided by the equation ($Z^2 + C = N$) which generates the Mandelbrot set, an extremely complex mathematical object, familiar to the public through its extraordinarily beautiful computer representations. [Z and C are complex numbers chosen at the start; the resulting number, N , is fed back into the equation as a new value for Z , producing N , etc., the

process being repeated ('iterated') indefinitely.] "To a remarkable extent, natural systems—especially biological systems—can be modeled by this technique, and, because of the feedback, they show self-similarity at different scales.

"The traditional contrast between 'orderly' and 'chaotic' behavior," continued Professor Pearce, "is giving way to the idea of different dimensions of complexity . . ." One important measure of this complexity is its fractal dimension. Examples of computer-generated fractal "landscapes" have captured public attention with their eerie resemblance to actual landscapes. Moviegoers have witnessed, if not recognized, fractals in the production of special effects in the film industry. The success of this application of fractal geometry helps to demonstrate chaos theory's fundamental relationship to natural systems.

To explore the application to dynamic systems, we must first draw a map of the system's behavior in "phase space;" a multi-dimensional mathematical space in which each point represents a possible state ("phase") of the system. The actual behavior of the system is then described by a unique trajectory through this space, whose points represent the actual states of the system over time. For a simple example, consider a free-swinging pendulum which eventually comes to rest. The phase space of its behavior would be a trajectory which spirals in to a central zero point. Such spirals come in different sizes, depending on how far and fast the pendulum swings, but they all end at the same point, representing rest. This point is called an "attractor" for the system, since all trajectories lead there. If the pendulum is kept going—by a battery for example—then the phase space trajectory would not be a spiral, but a closed loop. This loop is called a limit cycle attractor, since any initial trajectory would quickly converge on it—so long as the battery power is steady. (Another useful image is a valley surrounded by hills; stones rolling down from any part of the hillside will end up at the bottom, which thus "attracts" them. If you think of hills and valleys of energy, then we can say that the behavior of natural systems is "attracted" by energy valleys and "repelled" by energy hills.)

"Apparently random processes often lead to unexpected order and/or regularity . . ."

Complex systems are characterized by "strange" attractors, which are unpredictable because the trajectory never returns to the same point of the limit cycle. More importantly, all known strange attractors are fractals. Thus, the first step in determining what kind of attractors might govern the behavior of a complex system is to discover its fractal dimension. Professor Pearce said that by investigating these attractors ". . . we are slowly but surely approaching the day when we will be able to formulate and test hypotheses about the general principles underlying complex dynamical behavior."

Human brain function is an example of complex dynamical behavior which is the subject of current research in a number of centers. For example, attractors have been constructed for EEG data from subjects doing mental arithmetic and at rest. Some of these were seen in a film preceding Professor Pearce's presentation. His interest is in extending this research to data from the TMI Brainmapping Project. He proposes to investigate questions of the following kinds:

- Are there attractors characteristic of specific TMI focus levels?
- Are there attractors characteristic of specific consciousness states, even if not correlated with well-defined TMI frequency patterns?
- Can dynamical analysis begin to provide insight into phenomena seen in the TMI laboratory which, at present, appear to be random events?
- What implications would affirmative answers have

for the future development of Hemi-Sync technology and for controlled access to specific states of consciousness?

Professor Pearce reported that he has already consulted with one of the leading researchers in this field—Dr. Paul Rapp of the Medical College of Pennsylvania—whose research team was generous with time and advice. The next step will be to assemble a research group at his university: a brief preliminary discussion with applied mathematicians "shows promise" he says. The most important future step would be to spend extended periods at TMI, working with members of the Brainmapping Project. He hopes his presentation will help to foster that development. In anticipation, he has managed to arrange a year off from teaching, beginning next spring.

[For more information see: James Gleick, *CHAOS: Making a New Science*, Viking Penguin, Inc., 1987; Benoit Mandelbrot, *The Fractal Geometry of Nature*, W.H. Freeman & Co., 1977, 1983.]



HEMI-SYNC AND THE FACILITATION OF SENSORY INTEGRATION



by Suzanne Evans Morris, Ph.D.

Suzanne Evans Morris, a speech-language pathologist and educator in private practice near Charlottesville, Virginia, is nationally and internationally known for her work with children with developmental disabilities. Dr. Morris maintains a practice which includes direct clinical work, continuing-education workshops, development of clinical materials, and clinical research. She is the director of New Visions, which sponsors innovative professional workshops and provides family-oriented clinical services. She is also a member of the TMI Board of Advisors.

The ability to organize and integrate multisensory information is central to attention and learning. Children with sensory integrative dysfunction experience learning difficulties which range from severe retardation to mild, specific learning disabilities. The state of awareness facilitated by Hemi-Sync has been effective with these children because of its clinical association with an increased focus of attention, greater openness to learning, and improved sensory organization. Dr. Morris used videotaped examples with a theoretical model to explain how some of the changes in function may occur.

"Sensory integration," she explained, "is a term used to describe the way in which the brain sorts out and organizes for our use the many sensations we receive. It allows us to 'put together' parts to create a whole; it attaches meaning to sensations through

comparing them with past experiences; it enables high levels of motor coordination; it is the basis of perception." Because learning is presumed to be a function of the brain, and disorders of learning reflect a deviation in neural function, sensory input plays a critical role in brain function.

"None of us organizes sensations perfectly," Dr. Morris continued. "There is a continuum of skill in sensory processing and integration. A high level of sensory integration may enable an individual to be a skilled gymnast or artist. Most of us have average abilities in this area." About 5% to 10% of children experience "sensory integrative dysfunction," which means they have enough problems with sensory integration to cause slow learning, specific learning disabilities, or behavioral problems. Those with the poorest sensory integrative abilities usually have tremendous difficulty functioning in our complex world, and "... may fall within the diagnostic categories of severe mental retardation."

Some of the common characteristic differences of these children in their early development are: delays in learning to sit, stand, walk, run, tie shoes, or ride a bike; poor muscle tone; delays in language development; difficulty coloring or putting puzzles together; dislike of touch sensations; difficulty focusing attention, hyperactivity, and irritation or distraction by certain kinds of light or noise; and problems with social interaction and academic learning. Stimuli from the external environment can be chaotic

"... the addition of Hemi-Sync ... to the background music increases the child's focus of attention ..."

because "in sensory integrative dysfunction, the brain does not process or organize the flow of sensory impulses in a way that gives the individual precise information about himself and the world ... Children with severe [integrative] difficulties ... experience what we might call sensory overload. In order to survive the sensory chaos, portions of the brain shut down and the child may appear to be deaf, blind, autistic, or severely retarded."

Although sensory integration occurs at all levels of the central nervous system, the brain stem appears to play the most significant role in sensory processing. "The brain stem and the thalamus," Dr. Morris explained, "receive sensory information from every sensory modality. Information passing through these structures is modified, integrated with other sensory information, and directed to the cortex of the brain." As multisensory input is received by the brain, it acts to filter from consciousness, or dampen, any information which does not support the learner's inner needs and goals. "Children who have been labeled hyperactive are unsuccessful in filtering out irrelevant information."

Dr. Morris employs an effective treatment for sensory integrative dysfunction called sensory integrative therapy, which provides controlled sensory input in a way that allows the child to integrate sensations and enhance brain organization. "Treatment includes activities that allow sensory integration to occur primarily at the brain-stem level." To augment sensory integrative therapy techniques, she utilizes music and Hemi-Sync. Summarizing a discussion of brain neurophysiology and clinical evidence relative to the facilitation of sensory integration through the auditory system, Dr. Morris stated, "Both clinical experience and preliminary research indicate that the addition of Hemi-Sync signals (containing frequencies which produce more Theta patterns in the brain) to the background music increases the child's focus of attention and creates a mental set of open receptivity."

Citing an informal pilot study of twenty developmentally disabled children, Dr. Morris reported that each child was evaluated during learning/therapy sessions in three ways: 1) therapy only during the first third of the session; 2) therapy and music during the second third of the session; 3) therapy and music with Hemi-Sync

during the last third of the session. Informal data was collected on each child. Two of the children responded negatively to the Hemi-Sync with music, and its use was discontinued. Fifteen of the remaining eighteen children continued to receive music with Hemi-Sync. These children showed positive changes in the behaviors being addressed in treatment. "Changes which were observed," said Dr. Morris, "included improved focus of attention, reduction in tactile defensiveness and overall improvement in sensory organization, increased physical relaxation, improved motor coordination, and reduction in fearfulness." Also, all the children demonstrated a greater openness and enthusiasm for learning. In several cases, improvements were seen with just the music background. "However," she noted, "the degree of change was more pronounced when Hemi-Sync was combined with the music." Of the eighteen children, three showed minimal or inconsistent changes of behavior with Hemi-Sync.

Using dramatic, videotaped segments from actual therapy sessions, Dr. Morris illustrated significant changes in behavior associated with Hemi-Sync introduction. Some of the children, so sensorily dysfunctional that minimal contact or other sensory input caused extreme defensive reactions, and in one case, seizures, became visibly relaxed and focused after Hemi-Sync introduction. One child who could not tolerate being touched or held, reached out to Dr. Morris after listening to a Hemi-Sync *METAMUSIC* tape for a few minutes. "A hug tells you you're doing something right," she said.

"With greater acceptance of touch and movement," Dr. Morris concluded, "small contrasts can be provided which enable the child to develop and enhance sensory discrimination. As discrimination skills evolve within the sensory system, the survival sensory system is brought into balance and sensory defensiveness is permanently reduced. Research to explore the addition of specific auditory facilitation with Hemi-Sync is warranted."

[For more information on Dr. Morris's New Visions program, write or call: Route 1, Box 175-S, Faber, Virginia 22938; (804) 361-2285.]



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ACCELERATING CORPORATE CULTURE CHANGE THROUGH HEMI-SYNC



by Iris Martin, M.S.

Iris Martin, president of Creative Dimensions in Management, Inc. (CDM), a Philadelphia-based CEO support services firm, assists chief executive officers and senior executives in transforming their organizations' cultures to achieve their corporate vision. CDM has worked with both Fortune 500 organizations and fast-growing regional market leaders in a variety of industries, and has sponsored some of the most innovative and progressive research in the psychology of executive development. Ms. Martin holds a masters degree in psychological services from the University of Pennsylvania, and lives in New Jersey.

Creative Dimensions in Management is a leader in corporate culture transformation, utilizing a unique approach that integrates psychological and operational change strategies and techniques into a comprehensive model for transformation. In a fast-paced presentation, Ms. Martin described the application of Hemi-Sync in two phases of culture transformation: individual and group management training and mentoring, and customer analysis. "With the use of Hemi-Sync," she said, "commitments to performance improvement have greatly increased.

"Corporate transformation begins at the top. If the CEO doesn't support a change, it won't happen." So saying, Ms. Martin outlined CDM's intervention strategy, which integrates psychoanalysis and family therapy with operations management. The techniques of age regression and reparenting, CDM has found, are the most powerful modalities for personal change. Family therapy reveals how the corporate culture establishes its own ego. Transformation of a critical mass of key people within an organization produces a shift in the culture of the entire system. Ms. Martin interacts exclusively with chief executive officers, while her staff works with the executive managers who report to the CEO.

Presenting Hemi-Sync to corporate clients, CDM announces that they have discovered a new technology that will lead to greater bottom-line performance and a measurable increase in the achievement of management objectives. "I've yet to meet a CEO who cared about the personal growth of his people," Ms. Martin said. S/he needs to see the personal growth of his/her people as a means to an end. The CDM staff has packaged Hemi-Sync tapes as solutions. "If a client says, 'Gee, I'm an insomniac,' we say, 'We have a solution for that,'" she explained. One client, an aggressive, manic-depressive executive with a "roller-coaster ride" personality was given *Morning Exercise* and *Love Tennis*. Use of the tapes resulted in positive mental change and an improvement in his behavior toward others.

Hemi-Sync is used extensively with one-on-one work in the mentoring programs. "It's sort of a therapist's best friend," she said. The PAL [Progressive Accelerated Learning] Executive package, for

instance, has helped clients access deeper levels of consciousness and experience self-empowerment. *Love Tennis* and *Under Par Golf* are often used as effective introductions to Hemi-Sync. The sports performance approach often appeals to "macho" male executives as a means to build a competitive advantage. Once Hemi-Sync is experienced and curiosity is aroused, other tapes can be recommended as tools for business planning. CDM has seen breakthroughs in the level of commitment to bottom-line results.

The utilization of Hemi-Sync tapes during group work with a CEO and the top fifty or sixty managers often creates a "symbiotic, Gateway-like experience" that increases bonding. Group members tend to approach the CEO afterward on their own to promise performance increases—commitments they would never have made without Hemi-Sync, according to Ms. Martin.

Applied to customer and market analysis, Hemi-Sync helps to identify true consumer needs. Tapes are played during individual customer interviews. "The customer," she said, "needs to get into his internal experience deeply enough to reach [the level] where he actually makes choices." Hemi-Sync aids in accessing this level, thereby leading to more accurate information about consumer needs which can be used by CDM's clients to enhance customer service. Hemi-Sync has also been used to create a "holding environment" for the customer. Some businesses face special challenges in dealing with their customers. Hospitals and doctors, for instance, are often subject to "negative transference" wherein patients project their fears and anxieties onto the healthcare providers. In these cases, CDM gives careful attention to the ambience of the waiting room. The architecture and decor are strategically planned, and METAMUSIC tapes are played to enhance relaxation.

"One of my goals," Ms. Martin revealed, "is to create a corporate, on-site training program at The Monroe Institute modeled on the GATEWAY and GUIDELINES programs. It would be positioned as off-site business planning." The power of experiencing Hemi-Sync exercises in the nurturing environment of the programs, and the ability to receive controlled feedback, she believes, would be inestimable. In addition to special workshops, she envisions the development of personalized tapes to enable self-mirroring. "Corporate change is about intimacy," she explained, intimacy at all levels: with self, within the corporate culture, and between the corporation and its customers. Hemi-Sync is a tool for evoking

"With the use of Hemi-Sync, commitments to performance improvement have greatly increased."

intimacy. Ms. Martin expressed her deep desire to see the Hemi-Sync technology mainstreamed. "I consider this to be one of, if not the most, important technological breakthroughs of the century," she said. "It is a way in which you're led back to yourself ... a very elegant way."

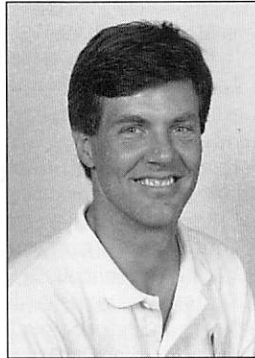
Some challenges are associated with mainstreaming to corporate America. The first is positioning and packaging. Individuals who want the safety of a corporate structure are not eager for self-exploration or self-confrontation. Hemi-Sync is more effectively presented as a process for self-empowerment—combined with conventional therapy or as a solutions tool in a mentoring program. Any relationship of Hemi-Sync to hypnosis would make it appear threatening.

The second challenge is marketing Hemi-Sync. As a result of offering corporate-tailored GATEWAYS, they would be added to a company's list of recommended programs, and Hemi-Sync tapes would become a part of multinational corporate libraries. Other market areas within the corporate milieu include sports training and retiring CEOs contemplating their next career.

[For more information on CDM, contact: Iris Martin, President, Creative Dimensions in Management, Inc., The Bourse, Suite 540, Independence Mall East, Philadelphia, PA 19106; (215) 923-7502.]



TEEN TAPES: A PILOT STUDY



by Robert Sornson, Ed.S.

Bob Sornson is supervisor of special education for the Jackson County Intermediate School District. He worked as a high school special education teacher for twelve years, and has the freedom to try new approaches and teaching tools, including Hemi-Sync.

The Teen Tapes is a series of twenty-four tapes intended for use by teenagers and educators, focusing on issues that confront teens today. Using the Hemi-Sync technology, these tapes offer twenty-five- to thirty-minute learning and relaxation sessions for use in school or home. Mr. Sornson described the Teen Tapes as "... a fun project with educational application of Hemi-Sync for teenagers." He has taken a "whole life" approach in the design of the Teen Tapes, addressing personal, family, social, and academic issues. An introductory music tape compares the mood-altering influences of rock, classical, and easy-listening selections, keying into the emotional effects of music. The introduction also explains to teens that they will be able to learn with their whole bodies and minds, and provides an overview of the Hemi-Sync technology present on the tapes.

A life- and mind-threatening experience years ago sparked Mr. Sornson's interest in the quality of education. While managing a fruit farm shortly after graduation from college, he was poisoned by a pesticide used on the trees, resulting in a tremendous amount of neurologic damage. Struggling to regain his mental and physical faculties during the slow recovery, he became interested in neurology and neurobiology, particularly vestibular and hearing problems. Still considerably impaired, he returned to school and received a degree in special education. His learning impairment taught him empathy, but not sympathy, for the difficulties of the children he worked with. Refusing to support a low expectation of his students' abilities, he noticed that special education kids "have incredible capacities for learning."

The neurology of thought processes and the way in which Hemi-Sync affects it is of particular interest to Mr. Sornson, and he began considering pragmatic applications, "ways to make Hemi-Sync effective for kids and to improve [an educational] system which needs it." As a district supervisor of special education, he enjoys a great deal of freedom from many of the review procedures that are necessary in a system of regular classrooms. Parents, teachers, and administrators are looking for "what works" for the students and are therefore more open to innovation. Public education, Mr. Sornson explained, is highly bureaucratized and resists any change of climate.

An innovative educator, Mr. Sornson does not consider himself a researcher. When he approached TMI about the Teen Tapes pro-

ject, his intention was to create a system which can be easily and effectively used in the classroom; a system to enhance learning and social skills as well as to give kids a tool for increasing self-esteem and relaxation. The result is a set of tapes, scripted and voiced by himself, and containing Hemi-Sync and appropriate sound effects embedded at the Institute lab. The pilot tapes were completed last winter. Since then several educators have been using the Teen Tapes, both in classroom and one-on-one situations.

"Some kids are willing to fight to listen to Hemi-Sync," Mr. Sornson said, discussing his early experiences with Hemi-Sync in special education. He told of two hyperactive boys with attention deficit disorder who came from dysfunctional families. Both boys had been labeled emotionally impaired. Entering a classroom, he encountered the youngsters ready to come to blows over who would listen to the *Retain-Recall-Release* tape from the *MIND FOOD* series. "That had an easy solution," he said, "anybody who fights doesn't get to listen to the tape." Hemi-Sync, he noticed, had a positive influence on kids' behavior, including changes in self-concept and relaxation. Its noninvasiveness and ease of use renders it more attractive than many other techniques.

Introducing other children to Hemi-Sync, it was noticed that the effects seemed to last even after only three weeks of listening. The results with kids with poor cortical integration were incredible. These children are characterized by showing disjointed movement and difficulty focusing, often the cause of self-concept problems and poor attitudes toward learning. From his observations of students' improvement, Mr. Sornson concluded that Hemi-Sync can affect basic neurology, stimulating cortical integration and whole-brain learning. "Good learning is whole-brain learning," he said. "Sensory integration must occur on all levels of the brain . . ." Other techniques for aiding cortical integration include encouraging children to use both sides of their bodies, physical play, and "patterning" specific body movements.

The Hemi-Sync *Surf* tape has aided several children. One autistic child was able to sleep at night for the first time. An emotionally impaired six-year-old experienced relief from a sleep disorder and improved her ability to relate interpersonally. The evidence of specific behavior changes demonstrates hemispheric synchronization and sensory integration, which led Mr. Sornson to believe that "Hemi-Sync helps the brain to communicate with itself better." Using the Hemi-Sync tapes *Surf* and *Energy Walk* with a school wrestling team contributed to the team qualifying for wrestling finals for the first time.

The Teen Tapes were scripted to address issues important to teenagers. The first series addresses self-concept, and deals with building positive self-esteem toward success in school and life. Suc-

Hemi-Sync had a positive influence on kids' behavior, including changes in self-concept and relaxation.

cess in school is the focus of the second series. The third series approaches goal setting and solutions. Methods for building skills to deal with peer pressure, drugs, and sex, among other issues, are offered. These tools are relevant even at the junior high school level and are also appropriate for adults. The fourth series focuses on creativity and harmony. Additionally, morning and evening tapes for teachers are included.

The tapes are designed to be presented sequentially, series by series, with each exercise being used three or four times. During this pilot, Mr. Sornson hopes to identify any "bugs" to be worked out in the series. After appropriate changes are made in the Teen Tapes, a more formal study will be initiated. So far, he explained, most of the feedback he has received from educators participating in the pilot has been very positive but lacking in critical comment.

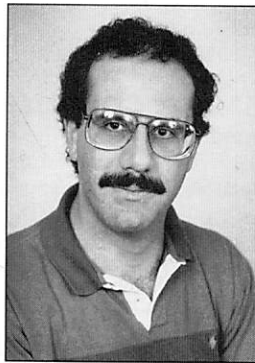
A community-based training facility dedicated to teaching work skills to kids with IQs of thirty to fifty has been using the Teen Tapes. The facility's goal is to insure that as many of their students as possible will be employable as adults. Generally, about three or four graduates of the facility per year are ready to move on to vocational training programs. After exposing the kids to the tapes three times a week over three months, fifteen children were ready to attend vocational training. Two or three children in a day treatment program as an alternative to institutionalization have been introduced to the Teen Tapes. Reports indicate that they are progressing academically as a result. A fourteen-year-old blind child is using the tapes to cope successfully with his impairment. Another fourteen-year-old with a history of mental illness and institutionalization was able, for the first time, to recognize her need for help before reaching a crisis point. The tapes have been credited with precipitating this change. Students using them within the athletic department have shown improvement in sports and academic performance.

An interesting by-product of the study with children has been the response of educators to the teacher tapes. One previously dysfunctional teacher with a negative attitude is now operating a functional classroom and seeing progress. Her outlook and performance have improved considerably.

The challenges ahead, suggested Mr. Sornson, will be to: 1) manage the bureaucratic obstacles to getting Hemi-Sync into school curricula; and, 2) develop educational products which can have an immediate impact. Approaching the students is easy, he said. "You just lay it out real simply and give kids a choice."



HYPNOSIS, HEMI-SYNC, AND HOW THE MIND WORKS



by Robert Rosenthal, M.D.

Bob Rosenthal, a board-certified psychiatrist in private practice in Bryn Mawr, Pennsylvania, subspecializes in the treatment of chronic pain and chronic medical illness. He holds the rank of clinical assistant professor in psychiatry at Hahnemann University, where he teaches a course on hypnosis to psychiatry residents.

"What is hypnosis, what are the differences and similarities between hypnosis and Hemi-Sync, and what do they tell us about how the mind works?" These questions posed by Dr. Rosenthal are also frequently asked by Hemi-Sync users. Using clinical and research data, he reviewed basic precepts in the theoretical and practical uses of hypnosis, a variety of physical and psychological conditions associated with hypnosis, and the corresponding contributions of Hemi-Sync.

Dr. Rosenthal's background includes teaching hypnosis, and extensive clinical and personal experience with altered states of consciousness. He has specialized in the areas of "affect theory,"

and multiple personality and disassociative disorders, and currently focuses on chronic illness, the psychological aspects of pain, and psychosomatics. His spiritual path is the "gel" that holds this all together.

"Hypnosis probably has as many definitions as there are researchers studying it," said Dr. Rosenthal. Quotations from two highly respected researchers in the field illustrate the diversity. One says "[Hypnosis is] an altered state in which the subject loses willingness and initiative to respond independently. Planning functions are turned over to the hypnotist, attention is redistributed, and perception is made selective according to the hypnotist's demands. Fantasy production increases and there may be an increase in suggestibility." Another expert defines hypnosis as "... the ability to respond to suggestions with distortions of perception, mood, or memory." Is hypnosis an altered state or a state of suggestibility? According to Dr. Rosenthal, most clinicians would agree that hypnosis involves an altered state of consciousness, called "trance." Suggestibility is a result of this altered, or trance, state that allows the subject to suspend the usual critical judgments about reality.

Researchers have dealt with the trance state by developing hypnotizability scales. Academic studies indicate that about twenty percent of the population is highly hypnotizable, ten percent are un hypnotizable, and the remainder fall between these extremes. Clinical hypnotists, working with highly motivated clients rather than volunteer test subjects, generally see a greater degree of hypnotizability across the population.

Considering the question "What is hypnosis from the subject's point of view?" he drew from the work of Charles Tart the description of a subject's trance experience, including feelings of: physical relaxation; blackness; peacefulness; diminished awareness of the immediate environment; diminished sense of identity; an increased potentiality to become anything or anyone; feeling that the experiences are "somehow timeless"; sense of oneness with the universe; diminution of mental activity; and breathing growing deeper and gradually becoming almost imperceptible. "From the subjective point of view," said Dr. Rosenthal, "I don't think there's much question that we're probably talking about a very similar state to [that which] Hemi-Sync induces... However," he continued, "Hemi-Sync is probably more controlled... because we know what we're plugging into the system."

Referring to the subjective trance experience described above, he asked, "How do we get there in hypnosis as opposed to Hemi-Sync?" Hypnotic induction, through a variety of techniques, paces and leads a subject from an awake and alert state into a trance state. Pacing focuses the subject on something in his/her immediate experience that is probably below the threshold of conscious awareness, such as the feeling present in the left foot. Then, the hypnotist leads the subject to notice something which was probably not in his/her immediate experience, such as "how comfortable and relaxed" the feeling is. Thus, pairing the pacing with leading and using "deepening" procedures, the subject moves into a trance state.

A state of consciousness may be defined as "a distinct context for processing, encoding, organizing, and retrieving events from memory." Studies show that memory is state dependent. That is, information stored in the memory while one is in a particular state can only be accessed when one reenters that same state. This is the basis for state-dependent learning. Further, "... any powerful emotion will define, induce, and create a state of its own." Stimulation of the same emotion can therefore trigger a re-creation of the associated state, sometimes causing a "flashback." One may not even be aware that s/he has changed states. Studies of multiple personality disorder, for instance, indicate that the individual changes state, or personality, instantly and without awareness of the change. Hypnotic induction, as a transition, draws attention to the state change.

Relative to states and state-dependent learning is the concept of "conditioning." Conditioning, also called "anchoring" in Neuro-linguistic Programming, uses techniques, or cues, to activate a

state, or retrieve stored information instantly. Hemi-Sync tape "encodings" and affirmations are examples of conditioning. Pacing and leading can be viewed as correlates to the Hemi-Sync entrainment process. Hypnosis operates primarily at the behavioral level, and Hemi-Sync operates at a neurochemical level. "You can already see," said Dr. Rosenthal, "that Hemi-Sync would most likely be highly useful in working with hypnosis and in enhancing hypnotizability."

Hypnotic induction, he summarized, "is a gradual transition, paced externally (by the hypnotist), that leads to a state change that the subject can perceive as such . . . and, because it can be perceived, is capable of being brought under conscious control." Enhancements to hypnotizability also include: all drugs, sensory deprivation, and biofeedback, which help one learn to break through barriers between consciousness states more easily.

Similarities between Hemi-Sync and hypnosis continue with the experience of "clicking out." This term is used at TMI to describe a period of time during a Hemi-Sync exercise of which the subject has no conscious memory. "The boundary between states is so significant," explained Dr. Rosenthal, "that on returning to waking consciousness you cannot retrieve that memory." The memory is state dependent. However, after repeatedly moving between states, familiarity is gained and the boundary is more easily breached, allowing memories to be "brought across" and incorporated into one's sense of self. Other similarities include falling asleep, time distortion, enhanced imagery, access to affect (or emotion), and enhanced concentration and learning.

Why is Hemi-Sync-induced or a hypnosis-induced trance useful? For one thing, it feels good. Dr. Rosenthal suggested, at the bedrock level, the utility of these states lies in their aid to spiritual growth and consciousness development. Another tremendous area of usefulness is in identifying information locked in the un-

. . . the utility of these states lies in their aid to spiritual growth and consciousness development.

conscious and resulting in inappropriate state-dependent behaviors. Phobias and stress disorders are examples of such behaviors. They are very difficult to deal with at the conscious level because of the fear accompanying the initial trauma. Hemi-Sync and hypnosis allow individuals to access the states, without fear, in which the memory of the primary trauma is stored. Once accessed, both the conscious and unconscious can reorganize the information, freeing the individual from the automatic behavior.

Physical symptoms, especially chronic symptoms, are frequently related to statebound trauma. State-dependent symptoms can be seen in cases of multiple personality disorder where subjects are medically diagnosed as having a condition which is exclusive to only one particular subpersonality. Also, somatic memory, in which the body responds to the memory of a traumatic event by recreating the physical reaction, is exemplified by phenomena such as stigmata. These data stimulate a way of thinking about physical symptoms and their connection to psychological processes, said Dr. Rosenthal, "that I like to think will change the shape of medicine within the next ten or fifteen years." Hemi-Sync trance becomes a neutral state from which one can gain access to an experience locked in a physical symptom.

With chronic pain, one can use trance to put the pain into an unconscious state and effectively block it from the consciousness, providing the pain does not have some deeper psychological meaning associated with it.

"The ability to move comfortably, fluidly, between these different states that we've been gifted with to experience human consciousness," Dr. Rosenthal concluded, "becomes optimal health."



STUDYING HEMI-SYNC EFFECTS ON ANIMALS



by Helene N. Guttman, Ph.D.

Now employed as the animal care coordinator in the Agricultural Research Service with the U.S. Department of Agriculture (USDA), and active in various metaphysical pursuits, Helene Guttman has a diverse education, with each advanced degree in a different scientific field. She has published extensively in various biomedical areas. Her publications include several on brain peptides that influence behavior.

Does Hemi-Sync affect animal behavior? Can nonhumans benefit psychoemotionally from it? There is a long anecdotal history implying that sounds influence animal physiology and behavior: farmers play certain music in chicken coops to increase egg laying, or in barns to stimulate milk production. Currently there is much interest in noninvasive methods for enriching the environments of research animals.

The use of animals in research is a controversial subject. As the ethical debate continues, researcher Helene Guttman is committed to identifying and implementing methods that support the well-being of animals in the research environment. During her *GATEWAY VOYAGE* in 1989 she was struck by the applicability of Hemi-Sync as a noninvasive system that can be introduced to animals with relative ease. For the past year she has been working to select the animal population, solicit collaboration, and develop a research design for controlled experiments to study Hemi-Sync with animals. Dr. Guttman spoke about the process and status of her investigations.

Animal models are frequently used as surrogates for human subjects in drug testing. Although no animal can be a complete model for humans, certain species are more appropriate for biochemical studies than others. Ninety percent of animals used for research, said Dr. Guttman, are rats and mice, especially for pharmacological testing. In certain areas of biochemical research it is considered critical to use nonhuman primates (NHPs). NHPs began to be imported for research about thirty years ago and are raised in specially designed primate centers. Previously, prisoners and mental patients were often used both as voluntary and involuntary subjects. This practice ceased with the initiation of human-subject review boards in each institution doing studies on people. The boards scrupulously review experimental protocol and insure that informed consent is obtained from each human subject. Although NHPs are not protected by informed consent, animal care and use committees are assigned to review and determine whether or not specific testing requires nonhuman primates and to insure the quality of the experimental protocol. The burden of proof rests on the researchers.

The animals' physical and psychological comfort are also a focus of attention. If the experiment requires restricting a naturally

social animal to an isolated, separate environment because of a potential health hazard, the animal's social needs must be fulfilled by the researchers in another way. Responses to these needs may include supplying interesting toys for play and grooming. "Individual stereotypic behavior," explained Dr. Guttman, "tells you when an animal is happy or unhappy. It will express its likes and dislikes." Careful observation will reveal whether an animal is unhappy simply by virtue of its particular environment. For instance, she said, "... some will exhibit behavior similar to [Dr. Morris's sensorially overloaded] kids."

It was in this arena of environmental enrichment for NHPs that Dr. Guttman identified the opportunity for Hemi-Sync intervention. A successful study would serve the animals and provide another means for the primate center to satisfy animal care and use committee requirements. Hemi-Sync could be a cost-effective, non-invasive, mood-changing modality supporting both the NHPs and their caretakers. The challenge she faced at that point was how to set up an experiment which would not interfere with studies already in progress.

Hoping to establish an experiment on the East Coast by the fall of 1989, Dr. Guttman began networking among colleagues. A promising contact was made with a primate animal behaviorist investigating individual animal responses. The primate facility contained videotaping and stereo sound delivery capabilities, ideal for implementation of the experiment. Dr. Guttman and the behaviorist began planning a methodology. At that time a young veterinarian who developed some of the toys for the animals asked to be involved in the program.

Then, as the project group was gearing up, new budgetary restrictions put the experiment on hold for at least a year. After investigating other avenues for NHP studies, Dr. Guttman concluded that farm animals would be the best alternative. She selected individually owned horses as the test group.

Currently there is much interest in noninvasive methods for enriching the environments of research animals.

Horse owners are generally quite aware of behavioral patterns and changes in their animals. Further, the horse racing and show industries have a vested interest in behavior enhancement techniques and may therefore be willing to sponsor a study. Employing an A-B-A research model of: A) establishing a baseline (non-Hemi-Sync); B) introducing Hemi-Sync; and C) returning to baseline (non-Hemi-Sync), monitoring physiological changes can be accomplished with a special electrode cap designed for horses to record EEG changes. Limited blood samples will be taken to test for behavioral peptides. Additionally, observed behavioral changes can be noted and recorded. Portable instrumentation is being designed that will allow simultaneous Hemi-Sync and brain-mapping data to be collected. Survey instruments can be designed to allow the researcher to remain unaware of whether or not an animal is receiving Hemi-Sync, thereby preserving the double-blind nature of the study.

With her design prototype prepared, Dr. Guttman expressed frustration about the delay in beginning an experiment. If responses to the horse study are favorable, the likelihood of support for an NHP experiment should increase dramatically. "Hemi-Sync as an NHP environment-enrichment tool," she reiterated, "would be cost-effective, important, and would serve the research community."

[Ed. note: Since the Professional Seminar, Dr. Guttman has recruited the participation of at least one individual horse owner with five animals who has begun to collect preliminary behavioral data.]



OPEN FORUM

Complementing the feature presentations, open forum sessions provided opportunities for members to initiate discussion, offer lectures, and lead group exercises on an informal basis.

Mary Ellen Visconti, M.S.; and Patricia Leva Michael, R.N.; were unable to attend the seminar and submitted videotapes. Ms. Visconti, entrepreneur and creator of Visconti 2000: A Resource Center for Mind/Brain Fitness, in Cambridge, Massachusetts, provided a walking tour of her facility. "The Monroe Institute training and Hemi-Sync tapes were vital to the launching of Visconti 2000," she explained. The opening in October of 1989 was based on bringing together sound, light, and language, as they can be applied to the learning process.

Ms. Michael's videotape, entitled "Do You Think I Can See Like Normal People See? Hemi-Sync and Blindness," was specially produced for viewing at the seminar. Sally, a client of Ms. Michael's, blind from infancy, chronicles her use of Hemi-Sync to develop her "real sight," improve her physical health, and regain her eagerness for living. This sixty-four-minute video interview is available through Natural Learning Systems, 5745 SOM Center Road, Cleveland, OH 44139-2330, or (216) 349-1148.

James R. Greene, of Arlington, Virginia, reported on the development of a positive immunity pilot program utilizing Hemi-Sync tapes and techniques. "The target group for participation in the program," he explained, "is HIV-infected people who want to maintain and improve their immune system functions." Based on the response to his preliminary program, Mr. Greene plans to continue refining and offering "Positive Immunity," and has been asked to make a presentation at Georgetown University Hospital.

Susan Cord, director of South Bay Mind-Body Connection in Redondo Beach, California, guided the group through "Journey into Cellular Memory," a visualization exercise she designed. Using *Inner Journey* from the *METAMUSIC ARTIST SERIES* to facilitate deep relaxation, Ms. Cord led participants through an age-regression experience to prebirth and back to the present. [For more information, see "Results of Use of Hemi-Sync Tapes and Synthesizer as Support for Personal Counseling and Therapy," by Susan Cord, *HEMI-SYNC JOURNAL*, SUMMER 1990, Vol. VIII, No. 3.]

Pauline Johnson, M.S., presented an update on her work as a vision therapist in private practice using Hemi-Sync and other systems to treat dyslexia and vision problems. Ms. Johnson develops custom-tailored programs for each client. During her session, she shared many of the techniques she has found effective. [For more information, see "Beyond 20/20," by Pauline Johnson, *BREAKTHROUGH*, WINTER 1989, Vol. VII, No. 1.]

ChowChow Imamoto, R.N., P.H.N., who offered a lecture on the "Radiance of Self-Healing," has been a holistic health nurse in private practice for fourteen years. Demonstrating Jin Shin Jyutsu, a system of subtle body energy balancing, she provided noninvasive techniques which can be self-administered to stimulate balancing and healing. [Also see "Jin Shin Jyutsu and Hemi-Sync in the Treatment of Quadriplegia," by ChowChow Imamoto, *HEMI-SYNC JOURNAL*, SPRING 1990, Vol. VIII, No. 2.]

Group discussions were initiated on the topics of accelerated learning, and Hemi-Sync in prison, led by Raymond Waldkoetter, Ph.D., and global economic crisis, led by Al Dahlberg, M.D., Ph.D.



SPECIAL PROJECT DEVELOPMENT

Because the Professional Seminar brings members together from around the world, it offers a rare opportunity for face-to-face collaboration. Several members took advantage of this opportunity to propose, report on, and solicit participation for special projects.

Russ Russell, M.A., from Cambridge, England, described plans to develop a book compiling information on Hemi-Sync applications. This book, he said, will be for the lay person, and will define and promote Hemi-Sync as a tool in its own right. It will provide information on the uses of Hemi-Sync to a greater population than that addressed by the literature distributed by TMI. Mr. Russell intends to include an interesting, comprehensive overview of the technology, a reference list, anecdotal information, and "how-to" instruction relative to some application areas. Much of the material published in the HEMI-SYNC JOURNAL can be used as a basis for further development. Contributions are being solicited from scientists, philosophers, physicians, lawyers, meditators, educators, psychotherapists, and others. Mr. Russell will edit the contributions for readability in both the UK and the United States, as well as include chapters on his and Jill Russell's work. Member response to the project was positive and several people expressed interest in contributing to the book.

The Russells are also involved in: testing the efficacy of translating TMI tapes into the East Indian dialect of Gujarati; spearheading the use of the *EMERGENCY SERIES* in a hospital in Scotland; pilot testing the Teen Tapes in England; and, coordinating a speaking engagement for Iris Martin at the Cambridge British and Scientific Community.

Susan Cord broached several project areas, including a series of pregnancy tapes. In collaboration with a pregnancy series previously initiated through TMI, she discussed the potential of Hemi-Sync as a tool for beginning life, and making the birth experience more comfortable and expansive. The Rebirthing process, a therapy aiding individuals to reconstruct their own birth experiences, can also be enhanced by Hemi-Sync. Ms. Cord proposed the development of special tape projects for both of these areas, as well as a

program for hospice work, already commenced by members Jill and Russ Russell and Ruth Domin (deceased), which will address and support the needs of terminally ill patients and their families. Ms. Cord also declared her interest in participating in the Teen Tapes project and the pain management project (see below).

Bob Rosenthal, Ph.D., gave a report on the status of his proposed double-blind study on the use of Hemi-Sync as a treatment for chronic pain. In response to an inquiry letter sent to all Professional Division members working with chronic pain sufferers, he received responses from nine people who expressed interest in participating in a collaborative study. Initial work on a testing protocol, and the preparation of rating forms have been completed. Test tapes with and without Hemi-Sync can be produced for the study. The volunteer subjects will be drawn from the patient caseloads of the participating practitioners.

ChowChow Imamoto, R.N., P.H.N., discussed her interest in working with the *STROKE RECOVERY* series in the treatment of clients recovering from injuries.

Readers interested in offering resources, information, or participation in any of these projects are encouraged to write to the project leaders through the Professional Division at The Monroe Institute, Rt. 1, Box 175, Faber, VA 22938.

HEMI-SYNC JOURNAL SUBSCRIPTION/MEMBERSHIP

The HEMI-SYNC JOURNAL is sent quarterly to members of The Monroe Institute. In return for their support of TMI, members also receive quarterly special-release audiocassette tapes, and the TMI FOCUS, highlighting the programs, activities, people, releases, and events that track the evolution of the Institute. Benefits also include reduced member prices on products developed by The Monroe Institute and Interstate Industries, Inc.

If you are not already a member and would like more information on membership benefits, please call or write The Monroe Institute, Rt. 1, Box 175, Faber, VA, 22938; (804) 361-1252.

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